actual size

SMD Quartz Crystal · SMU4

2 Pad Version · 11.5 x 4.8 mm

- low cost SMD type
- reflow soldering temperature: 260 °C max.
- package height 4.0 mm max.

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type	SMU4	
frequency range	3.2768 ~ 40.0 MHz	(fund. AT-cut)
	27.0 ~ 60.0 MHz	(3rd OT. AT-cut)
	24.0 ~ 40.0 MHz	(fund. BT-cut)
frequency tolerance at 25 °C	± 10 ppm ~ ± 30 ppm	
load capacitance C_L	12 pF ~ 32 pF or series	
shunt capacitance C_0	< 5 pF	
storage temperature	-40 °C ~ +90 °C	
drive level max.	500 µW (100 µW recommended)	
aging	< ± 5 ppm first year	

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
3.2768 ~3.999	fund.- AT	200	100
4.000 ~ 4.499	fund.- AT	120	60
4.500 ~ 5.999	fund.- AT	100	50
6.000 ~ 6.999	fund.- AT	80	40
7.000 ~ 9.999	fund.- AT	70	35
10.00 ~ 13.99	fund.- AT	50	25
14.00~ 40.000	fund.- AT	40	20
27.00 ~ 60.00	3rd OT - AT	120	80
24.00 ~ 40.00	fund.- BT	50	20

Frequency Stability vs. Temperature

		± 20 ppm	± 30 ppm	± 50 ppm	± 100 ppm	+10/-100 ppm
-20 °C ~ +70 °C		○	●	●		○ BT-cut
-40 °C ~ +85 °C	T1		○	○	●	

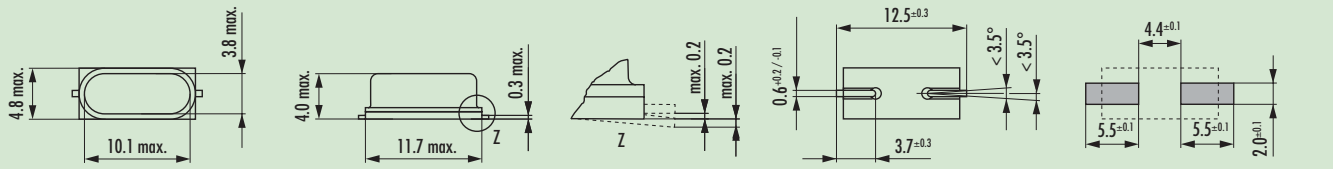
● standard
○ available

Marking

frequency with load capacitance code
company code / date code / internal code

	Jan.	Febr.	Mar.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.
2005	A	B	C	D	E	F	G	H	J	K	L	M
2006	N	P	Q	R	S	T	U	V	W	X	Y	Z
2007	a	b	c	d	e	f	g	h	j	k	l	m
2008	n	p	q	r	s	t	u	v	w	x	y	z

Dimensions



top view — side view — side view — bottom view — pad layout — in mm

Order Information

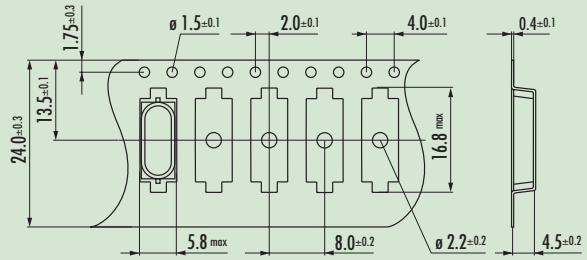
Q	frequency	–	type	–	load capacitance	–	stability at 25 °C	/	stability vs. temp. range	–	option
Quartz	3.2768 ~ 60.0 MHz		SMU4		30 pF standard 12pF ~ 32 pF S for series		30 = ± 30 ppm std		see table		blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C FU = for fundamental frequencies ≥ 20 MHz 3OT = 3rd overtone BT = fundamental BT-cut

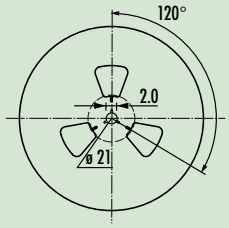
Example: Q 30.0-SMU4-30-30/30-FU (Suffix LF = RoHS compliant / Pb free pads)

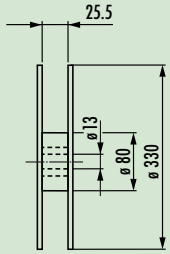
Jauch Quartz GmbH • e-mail: info@jauch.de
full data can be found under: www.jauch.de / www.jauch.fr / www.jauchusa.com
All specifications are subject to change without notice

SMD Quartz Crystal · SMU4

Taping Specification





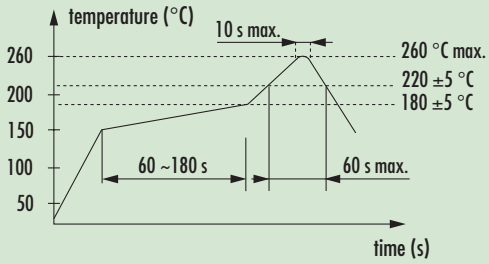


1000 pcs per reel

Direction of feed

in mm

Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Load Capacitance Codes

7 pF: m	13 pF: v	20 pF: c	32 pF: e
8 pF: k	14 pF: x	22 pF: g	series: s
9 pF: n	15 pF: j	24 pF: d	T: 3rd OT
10 pF: h	16 pF: b	25 pF: r	
11 pF: l	17 pF: t	27 pF: w	
12 pF: a	18 pF: f	30 pF: .	

example 4.0 MHz / 12 pF: 4a000

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